

From boatanchors@theporch.com Thu Jan 12 23:58:54 1995  
Date: Thu, 12 Jan 1995 20:27:07 -0600  
Message-Id: <9501130136.AA17556@kali>  
From: wallace@jericho.mc.com (Andy Wallace)  
Subject: 2-LF, nostalgia, and the famous Wet Ranger Story (tm)

Sorry if these messages seem a little stale. I had trouble getting the network to connect properly at work, and I also haven't been able to get near a terminal at work, so I'm doing this at home! Anyway....

###From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>  
Subject: silkscreening

###Someone recently wrote about not using  
###fonts from a computer to replace worn lettering on the original front  
###panel because "it would be akin to replacing the knobs on the equipment  
###that were non-original."

With the current computer technology available to an "average person" (even if it means using someone else's scanner and printer) I don't think one NEEDS to skimp on the technique here. I would imagine even Windows Paintbrush could do a good job, if you're willing to do it pixel by pixel.

###Museum level  
###restoration is great for those ravenous collectors who desire to lock up  
###their stuff in vaults and/or show off to the rest of the world their

Well, to a point...what's the fun in working on something if you can't enjoy it? Why have a pretty old ham rig (not something Ser #1 or otherwise rare, mind you) and not use it?

On the other hand, I don't believe in doing irreversible mods to ANY old equipment, even if you think it's a common piece. We have the cream of the crop in solid state available to us. Why drill a hole in an irreplaceable gem just to cram a VOX circuit inside?

###The final product and how you judge the end result  
###should be your standard! Cal, N6KYR.

And lets hope all our standards are high. Look in Electric Radio at some of Dave Ishmael's stuff....the man does beautiful homebrewing!

###From: "Bob Scott" <Bob\_Scott@cpqm.saic.com>  
###Subject: Re: COND, R388, DRAKE, RUBE

### As a novice I sometimes used to turn off all the lights and operate  
###in the soft glow of the tubes and panel lights. Soon, I will be able  
###to do that again. Sorry to ramble, but those were fond days when  
###radio was magical to me. Wish I could re-experience that feeling. Well,  
###enough rambling.

Well, like Lionel trains, we all have things we love to touch  
and use ... I think like most things, we remember these with more  
fondness now than when they were new to us. But I do remember clearly  
being frustrated with the dial calibration (and SPACING) on my HRO-50T1!

And as for those room lights, keep 'em low. :-) Makes you  
remember that you're playing radio again. As a kid I used to watch the  
red, yellow, and clear lights of my dad's Johnson Invader 2000 blink as  
he talked to people...

###From: Tony Stalls <rstalls@access.digex.net>  
###Subject: Re: silkscreening

###In a parallel instance, when the Smithsonian fabricates a part in a  
###restoration, it is clearly marked as such. I think that repainted  
###(restored) panels should be so marked too. After all, a counterfeit by  
###any other name is still a fake.

But WHERE to indicate this? Even a small notation on the front  
of the panel would be a distraction to me... Hmm, how about in that  
ultraviolet "operation I.D." ink? <grin>

###From: lstolz@tekelec.com (Lynn Stolz)  
###Subject: RE: The Drake List

###Here is my 2 cents worth regarding the Drake list:

###2-LF LW converter for the 2-B, I never personally saw one, but I believe  
### it plugged into the Noise blanker socket. Anybody remember?

Yep, there was indeed one... Plugs in in place of the  
CALIBRATOR on the 2-whatever, not the noise blanker. The 2-A and 2-B had  
noise blankers built in, except for a very early 2-A which had that  
switch as power for the Q-multiplier (2-AQ). The 2-LF converts LW up to  
the 10M ranges.

###2-NB 455 Kc Noise blanker for the 2-X receivers..Bill Frost @ Drake said  
### he used an electric razor to align it! Bzzzzzzzzzzzzzzzzzz.

I believe this would be for the 2-C only...see comment above.

###From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>  
###Subject: More stuff for sale

###1) Johnson Invader 2000 w/ power supply. Excellent condition (except for  
###scratch on one side of cabinet). With original manual and all p.s.  
###cables. Even has factory inspection tag. I have used this unit to check  
###in the vintage ssb net on 14.293 mcs. I am effectively the second owner  
###on this rig. Even has factory inspection tag available (factory built  
###unit). \$700

Geez, I wonder if my dad kept any records of the serial number  
on his? He used it with the A-4 until he bought a pair of SB-something  
twins, early 70s. If nothing else, that's a big, impressive rig! I have  
the 200 Watt version....gotta relive my childhood somehow!

###From: X90GALBRAIT1@wmich.edu  
###Subject: RE: WORST BA DEAL

###I just hope whoever is paying \$350 for a Ranger II 'as-is' isn't a  
###government official in financial affairs! Sounds like the reasoning  
###which accounted for \$750 pipe wrenches back in the 80s :)  
###73, Chris

Well, Chris, pardon me for repeating a story which I may have  
posted here last year, but which can cause a chuckle or two... A friend  
and I eagerly awaited the Deerfield NH flea a couple of year ago, in the  
Spring I think it was. Well, it was raining, but we said what the heck  
and drove there.... Got there at noon and paid the cheaper admission  
(than at 9 a.m.) [cheap admiss is now at THREE P.M.!] and wandered  
around the few dealers who had equipment under plastic sheets. Well, on  
one of the trips down the row we had parked in, someone had put a BC-348  
and a Ranger I out. In the rain. Uncovered! Now the 348 was pretty  
watertight, but the Ranger was getting all wet! We almost wanted to  
throw a coat over it. Well, we looked it over and it seemed in OK shape,  
all there, except the coupling for the Plate Tune was loose and the knob  
slid right out. My friend had a Ranger I and we thought if the guy was  
treating it this way, it was probably a \$20 parts set and completely  
fried under the chassis.

About an hour later we saw the dealer (who had left the rest of  
the junk in the car). We said, "hey, that rig is getting soaked!" The  
fellow replied, "they work better that way!" and tilted it so the water  
ran out the cabinet holes. He then slapped a TWO HUNDRED DOLLAR PRICE  
TAG on it!

Toward the time we had left (5:00 or so), we passed by the table  
again and the dealer had upped the price to \$225. No doubt it was worth

more when it was dried off.

Does this kind of thing amaze me? Sometimes....but then he had a \$175 price tag on an Eldico EE-3A hollowstate keyer, which was missing a knob. (I paid \$15 for mine.) God save us from the wheeler-dealers!

--Andy

From boatanchors@theporch.com Thu Jan 12 17:03:59 1995  
Date: Thu, 12 Jan 1995 14:20:39 -0600  
Message-Id: <CCMAIL.0093373.735718120095012FCCMAIL@EMIS.HAC.COM>  
From: "James C Reid" <0093373@ccmail.emis.hac.com>  
Subject: ABC's and E's & I's

Does anyone know of a source for small quantities of transformer laminations? I've got a couple ideas for a transformer construction project and while I could probably salvage old TV's for their innards, I figured it might just be as easy to buy new. Unless, of course, you have to buy gazillions of laminations. Thanks in advance for any info.

-Jim

From boatanchors@theporch.com Fri Jan 13 00:04:00 1995  
Date: Thu, 12 Jan 1995 20:17:55 -0600  
Message-Id: <9501130138.AA17562@kali>  
From: wallace@jericho.mc.com (Andy Wallace)  
Subject: Andy's FOR SALE list

Here's a slight update from my recently posted (I think I did!) WANT LIST....in other words, some stuff to SELL, too!

--Andy

Here are some things my local boatanchor friends and I are looking for. If you have any of these things -- or leads on them -- please e-mail me, post in this sub, or write me at

Andy Wallace  
P. O. Box 395  
Chelmsford, MA 01824

Netmail addresses:

=====

Internet: wallace@mc.com (include your addr in reply!)  
FidoNet: 1:324/278

WWIVNet: #6 @9203

Nice condition is preferred but "repairable" items might be considered....please be honest about condition and state who pays shipping.

ANDY &Co.'s WANT LIST: revised 7 JANUARY 1995:

DRAKE stuff:

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-- Original or copy Drake product catalogs/literature. I'm trying to help compile a list of released products.

OTHER Stuff:

=====

-- filters and modification kit for an R-388 to make it an R-388A. [I can hope, can't I?]

-- overlay for the KWM-2 bandswitch; a friend has one which has been modified into the 2A with 14 extra positions and he needs the overlay plate/label.

-- Volume knob for Zenith Transoceanic model G500. Black plastic knob which fits over 1/4" round spline pot -- not D shaped -- knob is 7/8" front to back and diameter, ridged around the outside and with a broad raised cone in the center. [That descriptive enough for ya?!] Also need spring clip to hold back cover on -- long clip which screws into the SIDE of the radio by the antenna, not the one on the flip-down back. A clip from either side would do.

ANDY'S STUFF FOR SALE -- WHAT A SURPRISE! :-)

-- ELECTRONIC LABORATORIES 6V VIBRATOR INVERTER SUPPLY. Unused, untested. Still has the 1944 inspection tag attached. Base is 5.5"x2.75" not including the mounting flanges at each end, which have 3 holes. 5.25" tall. Type is S-1364, 6VDC, output 335VDC, 15W., and the vibrator type is R-14B. Order number is 43189 if that helps, and has Navy inspection stamps on it. Input and output are with two screw terminals. What is it? Let me know what equipment this might go in..... Price? Make me an offer if you CAN use it!

-- Westinghouse THERMOCOUPLE for R.F. AMMETER. Marked 8-24-39, for use with a certain ser # ammeter, but maybe you can calibrate. Rated 10A, style 878647. Offer?

-- CRYSTAL, G.E. HC6/U fundamental is 12878.333 kHz, marked

154.5400T (transmit?) Free, I pay postage!

-- VOICE OF MUSIC T-137 PHONO EXTENSION SPEAKER ADAPTER.

Never seen these before...takes 1/4" phone plug input and adapts to two different sized pins, one 1/8" and the other slightly larger, 1/4" apart. Three units, new-in-boxes. Offers?

-- RCA RADIOMARINE CRYSTAL, model R-1, 2670 kc. Large unit with banana-pins. 1.5"x2". Offers?

=       =       =       =       =       =       =       =       =

There you have it. This list is fairly small, compared to other want-lists I've seen! Can you help me to make it smaller? Thanks...

--Andy

From boatanchors@theporch.com Thu Jan 12 11:41:25 1995  
Date: Thu, 12 Jan 1995 09:07:14 -0600  
Message-Id: <Pine.3.89.9501120718.A24398-01000000@netcom10>  
From: paul Veltman <veltman@netcom.com>  
Subject: BA Logo stuff

Hey sports fans,

I think that the idea to use the old Burnstein-Appleby logo is great. I can picture it now. A whole line of boatanchor-wear including:

Boatanchor T shirts - for Jeff because that's all they wear in Hawaii.

Boatanchor Sweats - for the rest of us because it's cold at 4AM.

Boatanchor Flashlights - So we can see what we're looking at at 4AM. The reason 4AM exists is because that's the latest that you can get to the Foothill Flea Market and still park in the same county. ;-)

Boatanchor Straight Jackets - When the non-ham of the family catches you out at 4AM with a flashlight looking at old radio gear and has you committed for your own protection.

Boatanchor Forklifts - For taking that treasure home.

73,  
Paul WA6OKQ

From boatanchors@theporch.com Thu Jan 12 10:14:39 1995

Date: Thu, 12 Jan 1995 07:41:19 -0600  
Message-Id: <"Macintosh \*/PRMD=MOT/ADMD=MOT/C=US/"@MHS>  
From: Scott\_Johnson-AZAX60@email.sps.mot.com  
Subject: RE>BA Nostalgia

Reply to: RE>BA Nostalgia

I could not disagree (or agree with Tony) more. I know of several "youth" who absolutely love classic gear, and like to experiment with hollow state, and I try to encourage them. I am 30 years old, and have been a BA fan since I was old enough to load one in my wagon and drag it home. I know kids that still react the way I did when I was young. Sure they have new toys, but if everyone assumes that kids are not interested, then sure enough, they won't be. Spend some time with budding hams and engineers, and you may be suprised at the reaction you get.

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Date: 1/11/95 7:16 PM  
To: Scott Johnson  
>From: wb4ijn@awod.com@azbcsml

Tony, K4KY0, recently posted an article re: preserving our boatanchor heritage by getting kids interested in "real radio" before they became jaded by HT's and such. He has an interesting theory that may well be worth exploring. However, none of my kids, my stepkids, or any kids that I come into contact with in the neighborhood, or church, or wherever are the least bit interested in radios, either old or new, unless they are the kind that come with earphones and can tune into the local FM rock station. COMPUTERS and CABLE TV are the things that interest them now. Besides, how many kids would want to put up with "75-Meter-Madness" when they can play computer games such as "Wolfenstein" or "Doom?"

From boatanchors@theporch.com Thu Jan 12 23:37:35 1995  
Date: Thu, 12 Jan 1995 21:09:17 -0600  
Message-Id: <21852@w5ddl.aara.org>  
From: n5off@w5ddl.aara.org  
Subject: ballast Tube Bypass

I've read, and am about to do, that you can bypass (short) the ballast tube active pins, and replace the 6BA6 BFO and PTO tubes with 12BA6's. Wouldn't this be better than some big resistors?

Tom

From boatanchors@theporch.com Thu Jan 12 05:46:35 1995  
Date: Thu, 12 Jan 1995 03:26:54 -0600  
Message-Id: <9501121228.22623.AA@smrouter.AAC.COM>  
From: Johnson\_Dan@aac.com  
Subject: Can one destroy a tube by...

I just know that I'm going to embarrass myself with this one. Gulp. Ok, here goes.

Here's a genuine and very basic question about tubes. Can one destroy a tube - in or out of circuit - by \*not\* supplying one or more of its constituent components with power while supplying one or more of the others with power?

For example, what happens if I lose filament power while the plate supply is still active? What happens if I cut the plate supply way down while the filament and grid supplies are at nominal voltage? Do the tubes in the circuit change in any way? Are they damaged?

Thinking out loud: Perhaps the answer depends on the particular circuit. If an electrolytic cap spans two voltages separated by more than the peak inverse voltage of the cap, and the higher voltage is cut off, the cap might be damaged, because the circuit polarity is wrong. The circuit is now different, and when the higher voltage supply is powered up, some other irreversible event might occur. Voltages to some pins of tubes (nevermind the other components) might exceed their ratings. (Should good circuit design avoid this problem altogether?)

Am I on the right or wrong track here? The reason for the question is that I treat tubes with such reverence that I'm afraid to try things with them. I can't really learn enough about them without trying things. Ignorance feeds on ignorance, so I go nowhere.

Why don't any of the books seem to say much about the behavior of components in marginal or failure conditions? Yeah, there are hints now and then, like what happens when a cap shorts in a power supply, and how to protect a fuse with an expensive diode. Is it necessary to burn out tubes or whole sections of radios to learn this stuff? Do I just need to acquire enough junkers that I don't care about, then have my way with them? Must I hurt the ones I love? Is this how everyone else learned over the past decades, or am I missing something obvious? (Wouldn't be the first time.)

Some of us of the transistor generation have fear. One false move near that transistor, and >>poof<<! Gone, and you'll be lucky to find another like it. Please, someone say that tubes are much more forgiving.

Can I really run the final's plate supply voltage (is that its "drive"?)



down as low as I want to reach QRP in a transmitter without damaging it and without analyzing its schematic first? Can I trust the rest of my receiver when I blow and repair its filament supply? If I do final testing of a newly constructed power supply by connecting it to the radio and slowly increasing the power to its primaries through a variac, am I risking the radio?

Maybe I should just sit down with Ohm's law and start hooking components together, VOM and 'scope probes in hand, to see what they do to each other in real life. One step a time.

Please accept my apologies for the length of this post and my, er, rambling, but this kind of thing has been bothering me for years and I seem to have hamstrung myself. I can't damage my computers (usually!) with my software, so I'm safe there. Just need some more self-confidence about this "real" radio stuff over here.

Although I wouldn't spurn (by any means) answers to my questions, what I'm really seeking is philosophy, guidance, direction, or someone to tell me to cut the crap and "just get in there and fight like the rest of us".

Hey, thanks for listening,  
de KC4EWT  
Johnson\_Dan@aac.com

From boatanchors@theporch.com Thu Jan 12 09:17:05 1995  
Date: Thu, 12 Jan 1995 06:42:23 -0600  
Message-Id: <Pine.3.89.9501120626.A25564-0100000@IndyNet>  
From: "Roberta J. Barmore" <rbarmore@IndyNet.indy.net>  
Subject: Re: Can one destroy a tube by...

Hi, Dan!

Okay, I'll take a try at this, with the caveat that I am \*not\* Ms. Tube Lady; I have messed about with tubes for over 20 years, and my present job revolves around The Care And Feeding of a half-dozen \*big\* tetrodes (two of them are 4CX24,000s--big enough?) but I have not got all the answers and the EEs in our midst (van Cleef, Schoo and Morgan where arrre you?) will have better dope on the topic. But I am in a position to hear that awful \*ZAP\* when something goes awry...and it has, more than once.

On Thu, 12 Jan 1995 Johnson\_Dan@aac.com wrote:

> Here's a genuine and very basic question about tubes. Can one destroy a  
> tube - in or out of circuit - by \*not\* supplying one or more of its  
> constituent components with power while supplying one or more of the others  
> with power?

There is one specific crash-landing here: one does not *\*ever\** bring up a screen-grid (tetrode, pentode, e to the xth-ode) tube's *\*screen\** supply before the plate--the screen will assume it's been called on to stand in for the plate, and usually die trying.

Nearly every other case is a qualified not-to-worry, see below. Ummm, don't remove drive from tubes that lack another source of grid bias, they don't like that. Grounded-grid amps *\*really\** don't like it, beseems me to recall. *\*pow!\**

> For example, what happens if I lose filament power while the plate supply  
> is still active?

*\*If\** the plate supply doesn't soar under no-load conditions (typically the bleeder value is chosen in such manner as to keep the B+ below the flashover limit of the components involved, not a problem; hams have even run separate amps for different bands from a common, *\*hardwired\** to each plate supply, and selected the one to use by lighting up the filaments.

However, many tubes, especially indirectly-heated ones, don't do well coming up to heat with the B+ (and drive makes it worse) hot--it shortens the life and can do odd things. We *\*never\** crash-start the big transmitter at work; filaments are generally kept on all the time and when we have to shut the whole thing down, it gets at *\*least\** ten minutes warm-up. (Bear in mind those tubes cost over US\$5K *\*each.\** They are precious gems and much coddled).

So it's not the greatest idea in the world but you can often get away with it...but you need to have a *\*very\** good notion of what the circuit will do under those conditions. Doping it out is pretty straightforward analysis and a few simple measurements; disconnect the B+, hang a meter on it and *\*see\** where the rail goes with no load but the bleeder resistor (if any).

> What happens if I cut the plate supply way down while the  
> filament and grid supplies are at nominal voltage? Do the tubes in the  
> circuit change in any way? Are they damaged?

This is usually what one does (well, you don't apply C- (grid bias)) in neutralizing an RF amplifier, so it shouldn't hurt. The cathode-grid circuit will be reverse-biased, so no problem. (Ummm, I do wonder about overdissipating a grid if you have drive on--never tried it. You'd have to have enough RF to get the grid into conduction for it to happen, and that's certainly probable).

> Thinking out loud: Perhaps the answer depends on the particular circuit.  
> If an electrolytic cap spans two voltages separated by more than the peak

> inverse voltage of the cap, and the higher voltage is cut off, the cap  
> might be damaged, because the circuit polarity is wrong. The circuit is  
> now different, and when the higher voltage supply is powered up, some other  
> irreversible event might occur. Voltages to some pins of tubes (nevermind  
> the other components) might exceed their ratings. (Should good circuit  
> design avoid this problem altogether?)

You're pretty much on track with this. Rule Number One: if you're going to run a thing "hell, West and crooked," you need to be *\*quite\** familiar with how it works normally and have a clear grasp of what all the parts do for a living!

...Good design does go a long way. The big TV transmitter over which I fret *\*will\** run messed up six ways from Sunday, and make a decent picture and fair power. Don't assume the design engineers were all-knowing, however--even the very best stuff can go out with some awful kludges awaiting the unwary.

> Am I on the right or wrong track here? The reason for the question is that  
> I treat tubes with such reverence that I'm afraid to try things with them.  
> I can't really learn enough about them without trying things. Ignorance  
> feeds on ignorance, so I go nowhere.

At the risk of severe flames, let me point out that little receiving tubes are cheap and doing Awful Things to a few of them is a pretty good way to learn. Be warned, however, that it's not *\*entirely\** predictive of what big power tubes will do; it's hard to scale everything down to where 200V will do a toy version of what 8kV will do!

> Why don't any of the books seem to say much about the behavior of  
> components in marginal or failure conditions? Yeah, there are hints now  
> and then, like what happens when a cap shorts in a power supply, and how to  
> protect a fuse with an expensive diode. Is it necessary to burn out tubes  
> or whole sections of radios to learn this stuff? Do I just need to acquire  
> enough junkers that I don't care about, then have my way with them? Must I  
> hurt the ones I love? Is this how everyone else learned over the past  
> decades, or am I missing something obvious? (Wouldn't be the first time.)

Somewhere around here, I have an RCA monograph on power tubes; it does go into some detail about how *\*not\** to mess them up. Care for a copy? (GE, Thompson, Burle and Comark, *\*please\** don't sue me!) It's been years since I had a transmitting tube manual around, but I believe they have similar info. Receiving tubes were pretty much considered expendable, so they didn't get the same sort of in-depth discussion; still the RC-26 manual here at work has a nice section, "Electron Tube Installation," that gives a good notion of what to watch out for and how to do things properly.

> Some of us of the transistor generation have fear. One false move near  
> that transistor, and >>poof<<! Gone, and you'll be lucky to find another  
> like it. Please, someone say that tubes are much more forgiving.

Lord \*yes!\* That's why I started working with them; I was young and ignorant, my father knew a bit about electronics, and he reasoned an occasional "bite" from a 67.5V B battery was better than me asking him for an advance on my allowance for yet another CK-722. Besides, he figured a novice at soldering stood a better chance--transistors don't do too well when you cook them.

Tubes are very forgiving until you really begin pushing the limits; even at that, very high-power tube design is a mature art and there's often at least some margin for error.

> Can I really run the final's plate supply voltage (is that its "drive"?)

Tch. "Drive" is how much RF the grid is getting! In tube rigs, this is sometimes controlled by adjusting the screen voltage of a preceding stage. Or varying the coupling between stages, and there are other ways.

> down as low as I want to reach QRP in a transmitter without damaging it and  
> without analyzing its schematic first?

Maybe, maybe not--get out the docs and your favorite beverage, sit down in a well-lit spot and get familiar! Knowing what goes on makes it \*much\* easier to run the gear. While I realize appliance operation is the norm, and maybe excusable with a solidly-packed, microprocessor-controlled modern rig that can beat you at checkers, it limits your fun with tube gear, and increases your risk. This stuff \*will\* bite you if you don't watch out.

> Can I trust the rest of my receiver  
> when I blow and repair its filament supply? If I do final testing of a  
> newly constructed power supply by connecting it to the radio and slowly  
> increasing the power to its primaries through a variac, am I risking the  
> radio?

Well, assuming a typical radio, if you pop the filament supply, you're out a transformer (IMHO), so the B+ is gone, too. Find out why it went, fix it and get a new transformer, and taa-daa!

As far as ramping up the AC supply to a radio goes, it's commonly done with old ones, especially on the initial test (after you've taken eyesight and ohmmeter to it, of course!). Not a problem.

> Maybe I should just sit down with Ohm's law and start hooking components  
> together, VOM and 'scope probes in hand, to see what they do to each other  
> in real life. One step a time.

You can, and it's a good way. You can also do at least some of it on paper \*first,\* then put it together and see if it acts per your predictions. It's a very good way to learn and build confidence in the process.

> Although I wouldn't spurn (by any means) answers to my questions, what I'm  
> really seeking is philosophy, guidance, direction, or someone to tell me to  
> cut the crap and "just get in there and fight like the rest of us".

Just hop right in there, mindful of the high voltage, and have a go; the only way to learn this stuff is to \*do\* it. A solid background in theory is \*very\* helpful; theory \*and\* hands-on is what it takes to produce results.

73,

--Bobbi

(You know, I can see my house from this soapbox!)

From boatanchors@theporch.com Thu Jan 12 16:19:33 1995

Date: Thu, 12 Jan 1995 12:57:13 -0600

Message-Id: <199501121858.MAA22324@zoom.bga.com>

From: Henry van Cleef <vancleef@bga.com>

Subject: Can one destroy a tube by...

As Johnson\_Dan@aac.com said

>

> I just know that I'm going to embarrass myself with this one. Gulp. Ok,  
> here goes.

Naww---it's a good question to ask.

>

> Here's a genuine and very basic question about tubes. Can one destroy a  
> tube - in or out of circuit - by \*not\* supplying one or more of its  
> constituent components with power while supplying one or more of the others  
> with power?

>

(concerns edited out)

> Am I on the right or wrong track here? The reason for the question is that  
> I treat tubes with such reverence that I'm afraid to try things with them.  
> I can't really learn enough about them without trying things. Ignorance  
> feeds on ignorance, so I go nowhere.

>

> Some of us of the transistor generation have fear. One false move near

> that transistor, and >>poof<<! Gone, and you'll be lucky to find another  
> like it. Please, someone say that tubes are much more forgiving.  
"Tubes are much more forgiving." I said it. The old-timers 30 years  
ago cursed transistors with the laconic comment that "Goddam collectors  
never will glow red and survive." The two things that are genuinely  
"fragile" about vacuum tubes are the glass bottles and  
filaments/heaters. Most folks recognize that cracking the glass and  
letting the vacuum out hurts the tube. The filaments on battery-type  
tubes (the little 1.4 volt filaments, and the filaments on old tubes  
like V99's, 11's, and 01A's are the most sensitive) won't take a lot of  
electrical abuse, and big transmitting tubes with thoriated tungsten  
filaments need to be handled properly.

Take off your wrist ground strap, quit looking at crowbar circuits in  
power supplies, and start thinking "safety first" because we aren't  
talking +/-5 and 12 volts. That's to protect you, not the tubes. If  
you've grown up in the transistor generation, you've probably gotten  
used to working habits that aren't safe with 250, 500, or 1000 volts.  
So I'll comment on safe working habits first----keep your body  
ungrounded, work with one hand, and consider what you are probing  
before you stick a probe in the circuit.

I think that 99% of "watch outfers" with tubes add up to "prolonged  
overdissipation." Larger transmitters have enough power to kill tubes  
without much "prolonged" time, and you can, with enough voltage, get  
flashovers that do nasty things. But a lot of the problems that show  
up involve many hours of improper operation before a tube protests to  
the point of giving up the ghost.

There are a few things that I think are more-or-less standard, and  
generally mentioned in all the practical texts and reference manuals,  
and a few others from "seen in service experience" that come to mind.

1. Anything with a screen grid (this includes 24A's and 6V6's as well  
as "slightly bigger stuff" like 813's): Make sure the circuit is set  
up so that you can't put B+ on the screen without putting it on the  
plate. B+ on the screen alone means that it is going to act like the  
plate and try to swallow the whole cathode current, which will heat up  
the little wires in the screen grid structure and burn them out. In  
most receivers and small transmitters (i.e., up to 807 and 6146 final  
size), the same B+ supply is used for screen and plate supply, so if  
one goes away, the other one does. Bigger stuff sometimes uses a  
separate supply and a relay to kill it, and just like the diode that  
protects the fuse, that relay will open every time except when the  
plate supply actually fails.

2. Cathode current control. By this I mean "loss of grid bias"  
protection---it may seem to be a funny way to put it, but that's what

the schemes for assuring grid bias in a transmitter final with no drive to the grids is addressing. Passive control of cathode current ( a resistor in the cathode circuit to make the cathode voltage go way up if it tries to draw a lot of current) is a good idea, even in circuits that use a C- bias voltage from a supply to the grids. Loss of bias is a real killer in "toob hi-fi" audio amplifiers, which generally don't have any passive backup protection. In sleeve cathode tubes, you've generally got time after loss of bias before there is any real damage, because the failure mode is plate meltdown (the collector will survive glowing red) from overdissipation. Thoriated tungsten filaments won't swallow a lot of overcurrent abuse though they'll generally come back to life by just heating the filament without any other electrode voltages applied for a few hours.

3. Grid gas current problems. Once again, most common in consumer audio amps using "6L6 on steroids" output tubes like 7027 and 7591 in fixed bias circuits. The RCA handbooks give "maximum circuit values" for grid circuit impedance to make sure that gas current doesn't pull grids up to make the tube overdissipate, and the typical value given is 100K for fixed-bias operation. The symptom here usually appears with new tubes in a circuit that "used to run fine," but with the new tubes, it still runs fine for a few minutes, then the plates start glowing red from overdissipation. I don't have any experience with Sovtek or Golden Dragon power tubes, but would keep an eye on this as a potential problem with them---I saw late US tubes giving this trouble. In a transmitter final with grids driven through a coil, DC resistance is zilch, so the place to watch for this is in resistance-coupled grid circuits like audio amps and modulators. Some off-the-shelf designs used as much as 470K in fixed-bias power circuits, assuming that the manufacturers' recommendations were too conservative.

4. Leaky "wax paper condenser" coupling caps---same problem as 3. above, from pulling the following grid up causing the tube to overdissipate. I have "religion" about getting rid of all wax paper condensers, which had failure modes that limited their service life to about 10,000 hours under ideal conditions, and it's safe to assume that "nice original SX-28A" hasn't been living under ideal conditions for the last fifty years---to say nothing of 10,000 hours (sixty weeks at 24 hours per day) having been accumulated over fifty years. The "keep it looking original" and "valuable heritage" purists don't agree with me on this one, but I learned that 100% replacement of wax paper condensers in a circuit with mysterious/intermittent woes was "the way to go" back around 1950, and nothing has come along to make me question that 1950 old-timer wisdom in the last 45 years.

5. 5U4 meltdown. These aren't the only tubes that have this problem, but they were the rectifiers used in circuits that had problems that led to it. It's a product of overloading the tubes to around 200% or

more, which would make the plates glow red and finally melt together, shorting across the power transformer plate winding. Generally caused by leaky filter caps and power tube circuits overdissipating because of leaky wax paper coupling caps pulling grids up. If you're lucky, there's a fuse in the primary power that blew when the tube melted down, or the switch or primary power wiring gave up first. If you're not lucky, you're looking for a power transformer. Moral: put a slow blow fuse in the primary circuit if there isn't one already, and don't plan on running filament-type high vacuum rectifiers much over their rated values (225 ma. for an original 5U4, 125 ma. for an original 80/5Y3). With sleeve cathode rectifiers (83-V, 5V4, 5AR4), the same type of overload generally will suck the cathode dry---the tube won't conduct current any more. The smaller sleeve cathode rectifiers (6X5, 35Z5, etc.) seem to survive this better. Tiny diodes (6H6, 6SQ7) will also show the "sucked dry" phenomenon, and it may not show up until the set has run 10-20 minutes (I just replaced a 6SQ7 for this in a big AM receiver that had run for some time with parasitics in the front end). One additional side comment---0Z4's---you'll learn to hate them. Generally found in auto radios and mobile equipment. Wire up pins 2+7 and use a 6X5.

Another common failure mode that comes to mind with sleeve cathode tubes that handle a lot of current (6AS7 series regulator setups included here) is burnout of the ribbon connecting the cathode sleeve to the lead to the outside world. This is visible, and says "short circuit somewhere."

6. 3-way portable (AC-DC-battery) filament circuit woes. These sets generally use a tube like a 35Z5, 70L7, 117L/M7, 117Z3, or a selenium, to develop both B+ and filament power on power line operation. Filaments are hooked in series and fed through a power resistor with a barrel cap (40 mikes typical) at the end of the filament string. If you open the filament string by pulling out a tube, that barrel will charge up to about 130 volts and discharge through the filaments if you plug the tube back in with the set "hot," which will generally blow out a filament as the cap discharges. A zener across the filaments to "catch" the voltage is a good idea, and tailoring the series resistance so that you see 1.3 volts (about halfway between a new zinc and a charged nicad "A" cell) if you use a silicon diode to replace a selenium is also a good idea.

7. Mercury vapor rectifiers, like 816, 866, 872. The tube manuals all give procedures for bringing these tubes up after installation---the gimmick is to get any metallic mercury off the electrodes. Run them for 15-20 minutes on filament voltage only after installation, then bring up plate voltage slowly----putting some ohms in the plate circuit to limit current if you do get flashover is a good idea.

>

> Can I really run the final's plate supply voltage (is that its "drive"?)



> down as low as I want to reach QRP in a transmitter without damaging it and  
> without analyzing its schematic first? Can I trust the rest of my receiver  
> when I blow and repair its filament supply? If I do final testing of a  
> newly constructed power supply by connecting it to the radio and slowly  
> increasing the power to its primaries through a variac, am I risking the  
> radio?

I hope you aren't thinking of doing QRP with an 813 final. The beauty of Eimac tetrodes (any tetrode) is that you can control power output with screen voltage. But trying to throttle down a pair of 4CX500's to give 10 watts doesn't make a lot of sense---hook the buffer to the antenna instead.

I'd suggest investigating the mysteries of QRP with something like a 6V6, a tube that I like better and better as time goes on. They'll give you around 20 watts in a push-pull circuit, and "work just like the big ones do" for learning your way around tetrode finals. They are relatively indestructable as well---a 6V6 will tolerate lots of abuse. Most of the little home-entertainment audio output tubes make good QRP finals, and you can get comfortable with the mysteries of modulation circuits, tank circuits, and antenna coupling with them.

Don't overlook the value of dummy loads. That new power supply, hooked up to a big resistor, isn't going to cook any circuits in your receiver while you scope it. And a QRP transmitter hooked to a resistor isn't going to get the attention of every TV-watcher in the neighborhood while you tune it up, check for parasitics, etc.

>

> Maybe I should just sit down with Ohm's law and start hooking components  
> together, VOM and 'scope probes in hand, to see what they do to each other  
> in real life. One step a time.

>

Taking a little time to learn what Kirchoff's voltage and current laws really mean, how to use Norton and Thevenin, and some basics about impedance in RLC circuits can do wonders both for your confidence and for getting results in "homebrew" stuff. That seems to me just as true for transistor stuff as for tubes. Spending some time with a "project radio" boatanchor receiver like a Hallicrafters S-38 or S-40 is a good place to start building confidence.

--

\*\*\*\*\*  
Hank van Cleef vancleef@bga.com vancleef@tmn.com  
\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 12 10:47:35 1995  
Date: Thu, 12 Jan 1995 08:24:39 -0600  
Message-Id: <"Macintosh \*/PRMD=MOT/ADMD=MOT/C=US/"@MHS>  
From: Don\_Burns-EPUR01@email.mot.com

I am looking for a GDO in reasonably good condition and working of course. Found a James Millen box locally a couple of weeks ago but no coils :-( Does anyone have a GDO they want to let go?

Don Burns            K4GHD            <epur01@email.mot.com>  
Plantation, FL

I just received an SX-43 that I bought over the net. I've wanted a 42 or 43 ever since I was a grade-schooler when I used to page through my dad's old ARRL handbooks. It's wonderful to finally have one that is in really nice condition. It's also great, through this list, to be in the company of other people who appreciate these fine old works of electronic art.

```

      ^          Mark Gaidos
     / \   ^    Mentor Graphics
    / \ / \ Wilsonville, Oregon USA
   / \ / \ (503) 685-1278
  |  | mgaidos@wv.mentorg.com

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A friend of mine is looking for unsalvagable HR0's of any vintage. All

he needs is the tuning capacitor and gearbox mechanism. But other parts (like IF cans) are useful. If you have any severely abused HRO

gear, please drop me a note. Thanks.

From boatanchors@theporch.com Thu Jan 12 08:25:21 1995  
Date: Thu, 12 Jan 1995 06:12:02 -0600  
Message-Id: <199501121213.AA29411@shore.shore.net>  
From: Michael Crestohl <mc@shore.net>  
Subject: I need a few back issues of the BA Digests....

Brrrrrrrrrr.....

I was away for a few days and the BA Digests somehow didn't reach my mailbox. I have up to Number 24. Does anyone else out there keep them and if so, can you please send me the missing ones. Better send me a message first - I can just see it now - 50 people sending me the stuff I missed!

Thanks guys (and gals!)

73,

Michael Crestohl KH6KD/W1  
mc@shore.net

From boatanchors@theporch.com Thu Jan 12 16:50:35 1995  
Date: Thu, 12 Jan 1995 13:52:39 -0600  
Message-Id: <950112194715\_71333.144\_DHQ84-2@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: Identify Collins 18M??

Can anyone help identify this Collins radio? Contact Charlie directly at 76645.3636@compuserve.com

>From: Charlie Cheney [76645,3636]  
Subj: Can you identify?

Hi Don,

I recently looked at your list of "For Sale" items and it made me think you might be able to help me identify a piece of surplus gear. I know very little about WWII vintage stuff. This unit is a combined xmtr/rcvr, made by Collins and has a nameplate calling it an "18-M". It tunes 2-16 MHz continuous in three bands, AM and CW, and was originally powered with a dynamotor. The xmtr uses 6V6 driver and modulators and a single 807

final. The rcvr uses 12SK7s and 12SA7s and a 6G6.

The unit has no military markings, but at least one of the tubes has Navy markings. It is 14" tall by 9 1/2" wide and nine inches deep. Holes in the bottom suggest that it was mounted that way. The dynamotor is 24V to 400V and 24V to 12V.

The xmtr and rcvr have separate but similar VFO controls and displays. The antenna connection is just a spring-loaded jack for a single wire; there is a similar ground connection. I have a loading coil which I believe was associated with this rig; it is also built by Collins and is marked as a 190 U-I LOADING COIL; it is about 2 1/2" high and 5 inches wide, and is a tapped coil with a coarse and a fine selector switch.

I did have this rig on the air about 20 years ago. It uses a keying relay so not the greatest, but still fun. Right now the xmtr seems OK (although I think the loading controls are looking for a higher impedance than 50 ohms, consistent with the antenna connection), but the BFO doesn't work and rcvr sensitivity may not be too good. I may get lucky and fix this with a set of tubes, but I would sure like to know what it is! Incidentally, the color is very dark OD, wrinkle finish.

I would like to get a schematic for this unit because the rcvr is not working very well (BFO seems to be dead). It was stored in a cellar for many years, but still looks in pretty good shape, and the xmtr works at least on CW. Do you know of a military designation for this unit?

Thanks for your help. I mostly operate HF with modern gear, but this "old soldier" has a certain appeal and I would like to get it up and running. 73.

Charlie, 76645,3636 AA1HB

From boatanchors@theporch.com Thu Jan 12 04:34:26 1995  
Date: Thu, 12 Jan 1995 02:20:43 -0600  
Message-Id: <Pine.3.89.9501120341.A15850-01000000@IndyNet>  
From: "Roberta J. Barmore" <rbarmore@IndyNet.indy.net>  
Subject: Re: Looking for Quad Selenium Rectifier

On Wed, 11 Jan 1995, Tom Alverson wrote:

[The topic, a hi-fi amp that had selenium rectifiers and in which retaining original appearance is important]

> > Why not put in a small silicon diode bridge rectifier and leave the

> > selenium one there for looks?  
>  
> That is what I normally do, but in this one the original part is  
> missing. I try to hide the 1n4005 diodes on the selenium rectifier  
> terminals.

Assuming you can't find a suitable selenium rectifier (try all of the nearby \*older\* radio/TV parts shops--some odd stuff shows up in the backs of the bins!), you could hack out a batch of suitably-sized square aluminium plates with a hole in the center; a long 6-23 screw, a stack of washers, and a dab of spray paint (light to dark blue, frequently), and you've got a lookalike under which to hide the silicon+resistor replacement!

...For extra points, use some shoulder washers to insulate longtailed solder lugs, upon which the actual working parts can be mounted. (No credit given for inadvertent shorts!)

If you do this, you're going to mystify some future repair tech no end! :)

(It just struck me, thinking of the really quite similar rectifier stacks in the big rigs at work: you could use small stud-mount diodes, if you can find 'em, or press-fit some "top hat" types into holes drilled in the plates of the faked selenium, and make the silly thing a functional structure).

73,  
--Bobbi

From boatanchors@theporch.com Fri Jan 13 00:38:08 1995  
Date: Thu, 12 Jan 1995 22:07:51 -0600  
Message-Id: <F1CM0448.F1CM0458@mail.admin.wisc.edu>  
From: TOM.A.ADAMS@mail.admin.wisc.edu  
Subject: Message Problems

to: boatanchors@ThePorch.com

Hello Out There!

Something seems to be wrong with the system; I haven't received a single BA message since the evening of 9 Jan. 95. Has there been a crash?

Tom, K9TA

From boatanchors@theporch.com Thu Jan 12 16:20:00 1995  
Date: Thu, 12 Jan 1995 13:33:35 -0600  
Message-Id: <Pine.3.89.9501121212.A2081-01000000@thelair.zynet.com>  
From: johnb@thelair.zynet.com  
Subject: NOS at the junque shop

This weeks treasure is a NOS "dynamic selenium rectifier tester"....  
Still in the box at my local junk store. No I didnt buy it! (but the  
home brew scope with the bakelite knobs and HRO dial is interesting!)

/john

John M. Brewer       wb5oau       " there's a reason the reset button  
johnb@thelair.zynet.com                   on a PC is on the front panel."

From boatanchors@theporch.com Thu Jan 12 17:26:43 1995  
Date: Thu, 12 Jan 1995 14:36:56 -0600  
Message-Id: <n1422208394.25163@cpqm.saic.com>  
From: "Bob Scott" <Bob\_Scott@cpqm.saic.com>  
Subject: Old Heathkit and Drake

Found this on rec.radio.amateur.equipment and thought someone might be  
interested. Please respond to originator, not me.

Subject: Old Heathkit (and Drake etc.) equipment for sale  
>From: pascalamb@aol.com (Pascalamb)  
Date: 12 Jan 1995 10:35:40 -0500  
Message-ID: <3f3i8c\$mvk@newsbf02.news.aol.com>

Folks,

I've finally been able to jot down the model numbers of the old ham radio  
equipment that my father left for me, and so far I haven't been able to  
locate the old Heathkit rigs that he used to have. I assume they are in  
storage, with lots of other old stuff. In any event, here's a list of the  
ham equipment that indeed is available and that I'd like to sell. All have  
not been used in years, but have been carefully stored in plastic, and are  
in excellent condition:

Drake R-4A Receiver

Drake T-4X Transmitter  
Gonset G-Sixty Three Receiver  
Drake Ms-4 Receiver  
Variac Auto transformer  
Lafayette HE-48  
Varitran Transformer Model V-1M  
Asiatic MS-4 Speaker

and two-three other microphones. Damned if I know where that Heathkit stuff is. He also used to own several morse code sets (or whatever you call it), but I can't find any of them. I also located a bunch of Volt/Amp/Ohmmeters that appear to be anywhere from 30-40 years old, and various other stuff.

Everything that I've located so far is in the Riverdale section of New York. If you're interested in any of the above, kindly contact me by e-mail with an indication of how much you'd be willing to pay.

Thanks much, and I'm sorry for the confusion re the Heathkit equipment. I will post a note here if and when I locate it.

73, Bob AC4QO Bob\_Scott@cpqm.saic.com

From boatanchors@theporch.com Thu Jan 12 14:27:50 1995  
Date: Thu, 12 Jan 1995 11:32:36 -0600  
Message-Id: <21651@w5ddl.aara.org>  
From: n5off@w5ddl.aara.org  
Subject: R-390A By Rubenstein? Read this . . .

----- Forwarded message -----

R:950108/0214Z @:N5UXT.LA.USA.NA #:49934 [New Orleans] \$:7428\_N4YRZ  
R:950108/0055z @:W5KSI.#NOLA.LA.USA.NA Winlink[NEW ORLEANS]70122 #:52429  
R:950108/0033z @:K4CJX.#MIDTN.TN.USA.NA NASHVILLE Z:37215 #:19607  
R:950107/1702z @:W4NPX.#CVA.VA.USA.NA CHARLOTTESVILLE, VA Z:22901 #:49079  
R:950107/1552Z @:N4YRZ.VA.USA.NA [Stuarts Draft] #:7428 Z:24477 FBB5.15

>From: N1PG@N4YRZ.VA.USA.NA  
To : N5OFF@K5ARH.LA.USA

Hi, Tom:

Read your bulletin ref R-390A's with interest. I am retired from the Navy, 24 years service in electronics. In 1956, I conducted the first field test on the Collins R-390 (not 390A), so have had a long-time interest in that series. Used and maintained and repaired R-390/R-390A until I retired in 1975.

The most unusual R-390A that I ever saw bore a builders label

indicating that the Manufacturer was Helena Rubenstein (the cosmetic maker). Regret that due to passage of time, and lost correspondence/notes, I am not able to identify better than the manufacturer.

In 1960, I was stationed at the Naval Security Group Activity, Bremerhaven, Germany, in the Research and Development Department. We received 3 R390A's Bearing the Helena Rubenstein label. I do remember that it was a Navy Contract, as opposed to Army, AF, etc.

The label was so unusual that I wrote several letters to track down the story. Here's what I got from a friend at Collins Radio, the original developer. Rubenstein decided to diversify into electronics, and since military contracts was where the money was, they bid on a contract for 80 R-390A rcvrs. At that time, they did not have on their staff a single electronics engineer, so they bid a ridiculously low price. Low Bidder won! Then they hired an engineer to set up an assembly line. He told them how much the whole thing would cost and they almost fainted. Rather than spend the money, they bought 80 R-390A's off the shelf from Collins for some exorbitant price, put their own labels on them, delivered them to the Navy and promptly forgot about going into electronics.

I'm sorry I cannot provide any further info about this batch of R-390A's but thought you might like this info as a sidelight on the History of the receiver.

73  
Harry  
N1PG

----- End of forwarded message -----

From boatanchors@theporch.com Fri Jan 13 00:06:22 1995  
Date: Thu, 12 Jan 1995 18:47:34 -0600  
Message-Id: <MAILQUEUE-101.950112175825.416@vilas.uwex.edu>  
From: "Terry O'Laughlin" <OLAUGHLIN@vilas.uwex.edu>  
Subject: Re: R-390A By Rubenstein? Read this . . .

> We received 3 R390A's Bearing the Helena Rubenstein label. I do  
> remember that it was a Navy Contract, as opposed to Army, AF,  
> etc.

Wow! I'd love to know the contract number for the Mil List.



73s      Terry O'

From boatanchors@theporch.com Thu Jan 12 16:32:04 1995  
Date: Thu, 12 Jan 1995 13:54:34 -0600  
Message-Id: <950112194838\_71333.144\_DHQ84-3@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: R389 Cable?

Where might I procure a power cable for a Collins R389?

From boatanchors@theporch.com Thu Jan 12 14:37:57 1995  
Date: Thu, 12 Jan 1995 11:56:24 -0600  
Message-Id: <9501121758.AA6082@hqsmtp.ops.3com.com>  
From: Joe Reda/HQ/3Com <Joe\_Reda@3mail.3com.com>  
Subject: R390A 3TF7 replacement docs

Hello BAers,

Someone asked me to send them a copy of the Hollow State Newsletter articles about replacing the 3TF7 with zener diodes. Due to a mail failure here the requester's mail to me has been consigned to the ether (it is probably in the place where single socks wind up). If you're out there, please re-send me your name & address so I can send this out to you . . .

By the way, this mod works quite well and consists of three 40 ohm 10 W resistors and a couple of zeners . . as the article says, it "forever ends your concern with the fragile and expensive 3TF7 ballast tube".

\\Joe KC6TXU

From boatanchors@theporch.com Fri Jan 13 00:56:37 1995  
Date: Thu, 12 Jan 1995 19:00:33 -0600  
Message-Id: <MAILQUEUE-101.950112185852.320@vilas.uwex.edu>  
From: "Terry O'Laughlin" <OLAUGHLIN@vilas.uwex.edu>  
Subject: Re: R390A help sought

> Rick, do you recall what the reasoning was here? Offhand, I can't see why  
> solid state replacements won't work as long as proper series resistors are  
> used to limit filter-inrush current and leave the voltage drop across the  
> diodes the same as it was with the tube rectifiers.

The 26Z5s do not conduct when cold. When the power supply is

switched on, the plate voltage rises at a rate proportional to the filament temperature. No resistor is going limit the "filter-inrush current" in the same manner. The limiting factor with the diode/resistor circuit is the time constant of the choke and capacitor B+ filter network. The series voltage dropping resistor will affect that time constant to a certain extent but it does not mimic the ramping effect of a vacuum tube rectifier that is warming up.

73s      Terry O'

From boatanchors@theporch.com Thu Jan 12 04:52:00 1995  
Date: Thu, 12 Jan 1995 02:37:12 -0600  
Message-Id: <Pine.ULT.3.91.950112002624.6137A-100000@ohm.elee.calpoly.edu>  
From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>  
Subject: Refinishing projects

Hello all!

Just to let you know on my two ongoing projects that I mentioned over the "net":

1) SP-200 cabinet. I finally located cabinet trim for the cabinet that I was working on. Some older repeater cabinets that my club obtained had some. Since they were out of sight, I was allowed access to the trim. Additionally, the cabinet came back from the powder coaters. I mounted the receiver into the cabinet and applied the trim. I'll tell you: I have never seen anything so gorgeous and stock looking. The cabinet use to look like a piece of trash. Powder coating it krinkle black and replacing the missing "beauty trim" made my SP-200 into a definite keeper! I followed up the refinishing by applying Turtle Wax Clearguard to help protect against dust, UV rads, and other nasty stuff (but in the shack, probably this is overkill). In any event, I decided to abandon the "brass trim" option. The present trim looks too good to replace. Another BA job done right!

2) My Globe King 500 rf deck is undergoing refinishing on the panel. I mentioned before that I was duplicating the front panel using computer produced laser printouts of the script and reconstructing the "Globe." Well, I also had those same powder coaters fill in some empty mod holes and powdercoat the panel. I don't seem to trust regular primer anymore and the powdercoat base should provide an excellent back for the paint I'm about to put on it. Prior to this front panel refinishing, I had the old Globe King WRL grey matched at my local paint shop. Then I contacted a local T-shirt company who does electronic silkscreening during the weekends as a side job. They accepted my master for their work. I believe

that by the end of the month, I'll have the RF deck completed.

So, any comments? I appreciate the feedback. I realize that paint, refinishing is a major topic in the BA net so this is my input on my project. I hope that any processes that may be of interest to all of you will help when it comes time to refinish your radio treasures. I sure like the results on all of mine so far! 73's. Cal, N6KYR

From boatanchors@theporch.com Thu Jan 12 20:09:43 1995

Date: Thu, 12 Jan 1995 15:31:49 -0600

Message-Id: <9501122132.AA10428@craysea.cray.com>

From: glitwin@craysea.cray.com (Gary Litwin)

Subject: SX-117 Notch filter coil needed...

Hello, Folks -

I have a friend whose SX-117 was recently fried.

He admits to being somewhat dyslexic, and managed to ground a wrong pin somewhere, and smoked what he described as a "peak-in coil for notch filter"

Does anyone happen to have a parts rig they can loot one of these from to sell to poor dyslexic Bob?

He would probably be willing to buy a parts rig if available, he really loves that Hallicrafters!

Please let he or me know, Thanks!

Gary Litwin  
glitwin@craysea.cray.com

Bob's address:

Bob Dorgan  
5019 8th N.E.  
Seattle, WA. 98105

(206) 547-3546

From boatanchors@theporch.com Thu Jan 12 20:21:24 1995

Date: Thu, 12 Jan 1995 13:49:42 -0600

Message-Id: <Pine.SUN.3.91.950112144236.7877C-100000@wabash.iac.net>

From: Bill Strangfeld <bstrang@iac.net>

Subject: Re: TBY-7 (fwd)

Tom Bryan asked about radioactive paint. This might be of general

interest. I hope Walt Hutchens forgives me for copying his comments from the 2/90 ER in the interest of safety. Here is what he said: The TBY has one design feature which you must consider if you plan to own or restore one. On most models, all front panel labels are done with radioactive paint; likewise the lines on the nine pointer knobs and the meter face and pointer. This point is "hot" enough that you must take a few precautions. No one should be within a few feet of this radio on a continuous basis. You can work on it, test it, and show it to visitors, but don't store or display it by your favorite chair or under your bed.

Take great care to avoid swallowing or breathing paint particles. Stay away from sets with peeling paint on the panel. If you clean the panel, wear rubber gloves and clean only with cotton swabs and paper towels, using only water; discard used materials and gloves in a sealed bag. They will not be radioactive enough to be detectable from a foot away, but you must not get particles in your mouth, lungs, etc. Under no circumstances use abrasive on or scrape any of the markings.

I'm not personally knowledgeable about the risks, but I'd prefer to err on the side of safety and take Walt's warning seriously. Another early issue of ER has an article in which the author (can't remember who) actually measured radiation from various WWII sets.

de Bill, WB8YUW

----- Forwarded message -----

Date: Thu, 12 Jan 1995 13:55:53 -0500 (EST)

>From: Thomas Bryan <tbryan@mailstorm.dot.gov>

To: bstrang@iac.net

Subject: Re: TBY-7

>

> On January 7, Dan Johnson asked for help identifying a TBY-7. It's a  
> Navy set that covered 28 to 80 Mcs. Walt Hutchens did a nice writeup in  
> the 2/90 Electric Radio. He also noted that the panel paint is  
> radioactive enough to take precautions. If you don't have access to this  
> article, send me your address and I'll copy it for you.

>

> Bill, WB8YUW <bstrang@iac.net>

>

I own several pieces of U.S. and Japanese WWII equipment that is painted with radium paint on the dials (including TBYs). Does anyone know how dangerous this stuff is?

Tom Bryan

tbryan@mailstorm.dot.gov

From boatanchors@theporch.com Thu Jan 12 08:35:56 1995  
Date: Thu, 12 Jan 1995 06:21:48 -0600  
Message-Id: <950112072504\_6553884@aol.com>  
From: JosephWP@aol.com  
Subject: Re: TUBE IDENT

Shaun,

The 6006 is a ruggedized 6SG7 (Canadian).  
The 5871 is a reggedized 6V6GT (Canadian).

Joseph Pinner +  
Lafayette, LA  
KC5IJD

From boatanchors@theporch.com Thu Jan 12 15:27:05 1995  
Date: Thu, 12 Jan 1995 12:49:03 -0600  
Message-Id: <9501121841.AA19109@uvs1.orl.mmc.com>  
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)  
Subject: Variacs

Well for many years I have brought unknown systems up gently but do it a bit differently: first I make an estimate of the current required (nearly every BoatAnchor has a WATTage listing on the back) and take out a bit for the fact that I am going to bring it up under a light load.

Once I have a number in mind, I set the voltage to 105, but bring things up on current and not voltage. If I see the amps coming up too fast, it gets shut down and three of the five senses go to work (sight, smell, and - very carefully - touch). Am exceedingly slow today but made too many "smoke tests" in my yout.

Warmly,  
Padgett

From boatanchors@theporch.com Thu Jan 12 11:49:49 1995  
Date: Thu, 12 Jan 1995 09:25:30 -0600  
Message-Id: <950112152452\_71333.144\_DHQ32-3@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: Want HP 312B or 312D

Anyone have or know of an HP 312B or 312D meter that is for sale?

From boatanchors@theporch.com Thu Jan 12 13:51:20 1995  
Date: Thu, 12 Jan 1995 11:11:53 -0600  
Message-Id: <199501121711.LAA23708@theporch>  
From: bgraham@tecnet1.jcte.jcs.mil  
Subject: Wanted Heath HW-16

I'm in the market for an HW-16

TNX

Bill